ELSEVIER

Forensic Science International 155 (2005) III–V

Forensic Science International

www.elsevier.com/locate/forsciint

Volume contents

Volume 155 (2005)

Regular Articles

Postmortem diagnosis of hypertonic dehydration
B. Madea and D.W. Lachenmeier (Germany) 1–6

Death due to neurogenic shock following gastric rupture in an anorexia nervosa patient
I. Sinicina, H. Pankratz, A. Büttner and G. Mall (Germany) 7–12

Sudden cardiac death in a 5-year-old girl associated with parvovirus B19 infection
F. Zack, K. Klingel, R. Kandolf and R. Wegener (Germany) 13–17

Evaluation of postmortem serum calcium and magnesium levels in relation to the causes of death in forensic autopsy
B.-L. Zhu, T. Ishikawa, L. Quan, D.-R. Li, D. Zhao, T. Michiue and H. Maeda (Japan) 18–23

Perianal and vulvar Crohn's disease presenting as suspected abuse
A. Porzionato, R. Alaggio and A. Aprile (Italy) 24–27

Accuracy of facial soft tissue thickness measurements in personal computer-based multiplanar reconstructed computed tomographic images
K.-D. Kim, A. Ruprecht, G. Wang, J.B. Lee, D.V. Dawson and M.W. Vannier (Republic of Korea, USA) 28–34

Pistol image retrieval by shape representation
C.-Y. Wen and J.-Y. Yao (Taiwan) 35–50

Legal perceptions of forensic DNA profiling. Part I: A review of the legal literature
S.J. Walsh (Australia) 51–60

Short Communication

Postfeeding radial dispersal in larvae of *Chrysomya albiceps* (Diptera: Calliphoridae): implications for forensic entomology
L. Gomes and C.J.V. Zuben (Brazil) 61–64

Announcement of Population Data

A study of mutation rates and the characterisation of intermediate, null and duplicated alleles for 13 Y chromosome STRs
D.J. Ballard, C. Phillips, G. Wright, C.R. Thacker, C. Robson, A.P. Revoir and D.S. Court (UK) 65–70

Development of two pentaplex systems with X-chromosomal STR loci and their allele frequencies in a northeast German population
M. Poetsch, H. Petersmann, A. Repenning and E. Lignitz (Germany) 71–76

Population data on 15 autosomal STRs in a sample from East Timor
L. Souto, C. Alves, L. Gusmão, E. Ferreira, A. Amorim, F. Côrte-Real and D.N. Vieira (Portugal) 77–80

Book Review

Handbook of Forensic Drug Analysis
C.L. Winek (USA) 81

Diary of future events ..... I–II

doi:10.1016/S0379-0738(05)00556-6

Regular Articles

Drugs and chronic alcohol abuse in drivers
B.M.R. Appenzeller, S. Schneider, M. Yegles, A. Maul and R. Wennig (Luxembourg, France) 83–90

Suspected clozapine poisoning in the UK/Eire, 1992–2003
R.J. Flanagan, E.P. Spencer, P.E. Morgan, T.R.E. Barnes and L. Dunk (UK) 91–99

Basic and neutral route specific impurities in MDMA prepared by different synthesis methods. Comparison of impurity profiles
M. Świst, J. Wilamowski and A. Parczewski (Poland) 100–111

Using spectral information in forensic imaging
G.M. Miskelly and J.H. Wagner (New Zealand) 112–118

A study of the performance and utility of annealing in forensic glass analysis
A.W.N. Newton, L. Kitto and J.S. Buckleton (New Zealand) 119–125

Bayesian analysis of fingerprint, face and signature evidences with automatic biometric systems
J. Gonzalez-Rodriguez, J. Fierrez-Aguilar, D. Ramos-Castro and J. Ortega-Garcia (Spain) 126–140

A study of impurities in intermediates and 3,4-methylenedioxymethamphetamine (MDMA) samples produced via reductive amination routes
P. Gimeno, F. Besacier, M. Bottex, L. Dujourdy and H. Chaudron-Thozet (France) 141–157

False positives and false negatives with a cocaine-specific field test and modification of test protocol to reduce false decision
Y. Tsumura, T. Mitome and S. Kimoto (Japan) 158–164

Application of the Electrical Network Frequency (ENF) Criterion. A case of a digital recording
M. Kajstura, A. Trawinska and J. Hebenstreit (Poland) 165–171

The relationship between performance on the standardised field sobriety tests, driving performance and the level of Δ9-tetrahydrocannabinol (THC) in blood
K. Papafotiou, J.D. Carter and C. Stough (Australia) 172–178

Ethylene glycol poisoning
P.M. Leth and M. Gregersen (Denmark) 179–184

Luminous lip-prints as criminal evidence
A. Castelló, M. Alvarez-Seguí and F. Verdú (Spain) 185–187

The distribution of shotgun pellets after ricochet from an intermediate target surface
W.F. Rowe (USA) 188–192

Determination of several psychiatric drugs in whole blood using capillary gas–liquid chromatography with nitrogen phosphorus detection: comparison of two solid phase extraction procedures
C. Sánchez de la Torre, M.A. Martínez and E. Almarza (Spain) 193–204

Announcement of Population Data

Y-chromosome STR haplotypes in Danes
C. Hallenberg, K. Nielsen, B. Simonsen, J. Sanchez and N. Morling (Denmark) 205–210

Y chromosome polymorphisms and haplotypes in South Saxony-Anhalt (Germany)
U.-D. Immel, M. Kleiber and M. Klintschar (Germany) 211–215

Allele frequencies for nine STR loci in a Korean ethnic group from northeast China
Y. Zhang, Q. Xu, H. Cui, Y. Cui, K. Kim and J. Lee (P.R. China, Republic of Korea) 216–218

Allele frequencies of 15 STR loci of Luoba ethnic group in Tibet (Southwestern China)
L. Kang and S. Li (China) 219–221

Letters to the Editor

'SEM-EDS analysis and discrimination of forensic soil' by Cengiz et al. [1]. A comment
P.A. Bull, R.M. Morgan, S. Dunkerley and H.E. Wilson (UK) 222–224

SEM–EDS analysis and discrimination of forensic soil
S. Cengiz (Turkey) 225

Alarm pheromones as an exponent of emotional state shortly before death—Science fiction or a new challenge?
R. Hauser, M. Wiergowski, T. Gos, M. Marczak, B. Karaszewski and Ł. Wodniak-Ochocińska (Poland) 226–230

Commentary on investigation of sudden unexpected deaths in infancy
K.M. Tomashek, C. Shapiro-Mendoza and T.W. Davis (USA) 231–232

Comments on diethylene glycol concentrations
L.J. Schep and R.J. Slaughter (New Zealand) 233

Diary of future events ..... I–II
Volume contents ..... III–V
Author index ..... VI–VII
Subject index ..... VIII–XI

ELSEVIER

Forensic Science International 155 (2005) VI–VII

Forensic Science International

www.elsevier.com/locate/forsciint

Author index

Volume 155 (2005)

Ålaggio, R. **155**, 24
Almarza, E. **155**, 193
Alvarez-Seguí, M. **155**, 185
Alves, C. **155**, 77
Amorim, A. **155**, 77
Appenzeller, B.M.R. **155**, 83
Aprile, A. **155**, 24

Ballard, D.J. **155**, 65
Barnes, T.R.E. **155**, 91
Besacier, F. **155**, 141
Bottex, M. **155**, 141
Büttner, A. **155**, 7
Buckleton, J.S. **155**, 119
Bull, P.A. **155**, 222

Carter, J.D. **155**, 172
Castelló, A. **155**, 185
Cengiz, S. **155**, 225
Chaudron-Thozet, H. **155**, 141
Court, D.S. **155**, 65
Côrte-Real, F. **155**, 77
Cui, H. **155**, 216
Cui, Y. **155**, 216

Davis, T.W. **155**, 231
Dawson, D.V. **155**, 28
Dujourdy, L. **155**, 141
Dunk, L. **155**, 91
Dunkerley, S. **155**, 222

Ferreira, E. **155**, 77
Fierrez-Aguilar, J. **155**, 126
Flanagan, R.J. **155**, 91

Gimeno, P. **155**, 141
Gomes, L. **155**, 61
Gonzalez-Rodriguez, J. **155**, 126
Gos, T. **155**, 226
Gregersen, M. **155**, 179
Gusmão, L. **155**, 77

Hallenberg, C. **155**, 205
Hauser, R. **155**, 226
Hebenstreit, J. **155**, 165

Immel, U.-D. **155**, 211
Ishikawa, T. **155**, 18

Kajstura, M. **155**, 165
Kandolf, R. **155**, 13
Kang, L. **155**, 219
Karaszewski, B. **155**, 226
Kim, K. **155**, 216
Kim, K.-D. **155**, 28
Kimoto, S. **155**, 158
Kitto, L. **155**, 119
Kleiber, M. **155**, 211
Klingel, K. **155**, 13
Klintschar, M. **155**, 211

Lachenmeier, D.W. **155**, 1
Lee, J. **155**, 216
Lee, J.B. **155**, 28
Leth, P.M. **155**, 179
Li, D.-R. **155**, 18
Li, S. **155**, 219
Lignitz, E. **155**, 71

Madea, B. **155**, 1
Maeda, H. **155**, 18
Mall, G. **155**, 7
Marczak, M. **155**, 226
Martínez, M.A. **155**, 193
Maul, A. **155**, 83
Michiue, T. **155**, 18
Miskelly, G.M. **155**, 112
Mitome, T. **155**, 158
Morgan, P.E. **155**, 91
Morgan, R.M. **155**, 222
Morling, N. **155**, 205

Newton, A.W.N. **155**, 119
Nielsen, K. **155**, 205
Ortega-Garcia, J. **155**, 126

Pankratz, H. **155**, 7
Papafotiou, K. **155**, 172
Parczewski, A. **155**, 100
Petersmann, H. **155**, 71
Phillips, C. **155**, 65
Poetsch, M. **155**, 71
Porzionato, A. **155**, 24

Quan, L. **155**, 18

Ramos-Castro, D. **155**, 126
Repenning, A. **155**, 71
Revoir, A.P. **155**, 65
Robson, C. **155**, 65
Rowe, W.F. **155**, 188
Ruprecht, A. **155**, 28

Sánchez de la Torre, C. **155**, 193
Sanchez, J. **155**, 205
Schep, L.J. **155**, 233
Schneider, S. **155**, 83
Shapiro-Mendoza, C. **155**, 231
Simonsen, B. **155**, 205
Sinicina, I. **155**, 7
Slaughter, R.J. **155**, 233
Souto, L. **155**, 77
Spencer, E.P. **155**, 91
Stough, C. **155**, 172
Świst, M. **155**, 100

Thacker, C.R. **155**, 65
Tomashek, K.M. **155**, 231
Trawinska, A. **155**, 165
Tsumura, Y. **155**, 158

Vannier, M.W. **155**, 28
Verdú, F. **155**, 185

doi:10.1016/S0379-0738(05)00557-8

Vieira, D.N. **155**, 77

Wagner, J.H. **155**, 112
Walsh, S.J. **155**, 51
Wang, G. **155**, 28
Wegener, R. **155**, 13
Wen, C.-Y. **155**, 35
Wennig, R. **155**, 83
Wiergowski, M. **155**, 226
Wilamowski, J. **155**, 100
Wilson, H.E. **155**, 222
Winek, C.L. **155**, 81
Wodniak-Ochocińska, Ł. **155**, 226
Wright, G. **155**, 65

Xu, Q. **155**, 216

Yao, J.-Y. **155**, 35
Yegles, M. **155**, 83

Zack, F. **155**, 13
Zhang, Y. **155**, 216
Zhao, D. **155**, 18
Zhu, B.-L. **155**, 18
Zuben, C.J.V. **155**, 61

ELSEVIER

Forensic Science International 155 (2005) VIII–XI

Forensic Science International

www.elsevier.com/locate/forsciint

Subject index

Volume 155 (2005)

Allele frequencies; Forensic science, STRs (short tandem repeats), Population data, Luoba ethnic group, Chinese **155**, 219

AmpF/STR identifiler; East Timor, STRs, Population data **155**, 77

AmpF/STR Profiler plus; STR, Korean ethnic group, Northeast China **155**, 216

Annealing; Glass, Refractive index, Forensic casework **155**, 119

Anorexia; Gastric rupture, Binge eating, Fatal **155**, 7

Antifreeze; Ethylene glycol, Poisoning **155**, 179

Authenticity; Digital audio recording, ENF Criterion, Signal integrity **155**, 165

Bayesian; Biometrics, Face, Fingerprint, Forensic, Signature **155**, 126

Binge eating; Gastric rupture, Anorexia, Fatal **155**, 7

Biochemical profile in vitreous humor; Hypertonic dehydration, Vitreous humor, Dehydration pattern **155**, 1

Biometrics; Bayesian, Face, Fingerprint, Forensic, Signature **155**, 126

Blood alcohol concentration; Driving under the influence, Medicinal drugs, Illicit drugs, Poly-drug use, Chronic alcohol abuse **155**, 83

Blowfly; Forensic entomology, Larval dispersal **155**, 61

Calcium; Forensic pathophysiology, Postmortem biochemistry, Serum, Magnesium, Cause of death **155**, 18

Cause of death; Forensic pathophysiology, Postmortem biochemistry, Serum, Calcium, Magnesium **155**, 18

Chinese; Forensic science, STRs (short tandem repeats), Allele frequencies, Population data, Luoba ethnic group **155**, 219

Chronic alcohol abuse; Driving under the influence, Blood alcohol concentration, Medicinal drugs, Illicit drugs, Poly-drug use **155**, 83

Cobalt thiocyanate; Cocaine, Crack, Field test **155**, 158

Cocaine; Crack, Field test, Cobalt thiocyanate **155**, 158

Crack; Cocaine, Field test, Cobalt thiocyanate **155**, 158

Crime scene reconstruction; Forensic science, Ricochet, Shotgun **155**, 188

Criminal law; Forensic science, DNA profiling, DNA databases, Law enforcement **155**, 51

Criminalistics; Luminescence, Latent prints, Nile Red **155**, 185

Crohn's disease; Sexual child abuse, Medicolegal examination, Judicial report **155**, 24

X chromosome; STR, Multiplex, Population data **155**, 71

Y Chromosome; STR polymorphisms, UK populations, Mutation rates **155**, 65

Y-chromosome STR; Haplotype, Population genetics, Danes **155**, 205

Y-chromosome STRs; Haplotypes, Population genetics **155**, 211

CT; Face, Measurement, Soft tissue thickness, MPR image, PC-based **155**, 28

Danes; Y-chromosome STR, Haplotype, Population genetics **155**, 205

Dehydration pattern; Hypertonic dehydration, Vitreous humor, Biochemical profile in vitreous humor **155**, 1

Digital audio recording; Authenticity, ENF Criterion, Signal integrity **155**, 165

doi:10.1016/S0379-0738(05)00558-X

DNA databases; Forensic science, DNA profiling, Law enforcement, Criminal law **155**, 51

DNA profiling; Forensic science, DNA databases, Law enforcement, Criminal law **155**, 51

Driving impairment; Marijuana, Δ9-tetrahydrocannabinol, SFSTs **155**, 172

Driving under the influence; Blood alcohol concentration, Medicinal drugs, Illicit drugs, Poly-drug use, Chronic alcohol abuse **155**, 83

East Timor; STRs, Population data, AmpF/STR identifiler **155**, 77

ENF Criterion; Authenticity, Digital audio recording, Signal integrity **155**, 165

Ethylene glycol; Antifreeze, Poisoning **155**, 179

Face; Bayesian, Biometrics, Fingerprint, Forensic, Signature **155**, 126

Face; Measurement, Soft tissue thickness, CT, MPR image, PC-based **155**, 28

Fatal; Gastric rupture, Anorexia, Binge eating **155**, 7

Fatal poisoning: clozapine; Post-mortem redistribution: clozapine, Plasma:whole blood distribution: clozapine, Fatal poisoning: interpretation of results **155**, 91

Fatal poisoning: interpretation of results; Fatal poisoning: clozapine, Post-mortem redistribution: clozapine, Plasma:whole blood distribution: clozapine **155**, 91

Field test; Cocaine, Crack, Cobalt thiocyanate **155**, 158

Fingerprint; Bayesian, Biometrics, Face, Forensic, Signature **155**, 126

Firearm databases; Image retrieval, Forensic science **155**, 35

Forensic; Bayesian, Biometrics, Face, Fingerprint, Signature **155**, 126

Forensic casework; Glass, Annealing, Refractive index **155**, 119

Forensic entomology; Blowfly, Larval dispersal **155**, 61

Forensic pathophysiology; Postmortem biochemistry, Serum, Calcium, Magnesium, Cause of death **155**, 18

Forensic science; Crime scene reconstruction, Ricochet, Shotgun **155**, 188

Forensic science; DNA profiling, DNA databases, Law enforcement, Criminal law **155**, 51

Forensic science; Image retrieval, Firearm databases **155**, 35

Forensic Science; Imaging, Spectroscopy **155**, 112

Forensic science; STRs (short tandem repeats), Allele frequencies, Population data, Luoba ethnic group, Chinese **155**, 219

Gas chromatography; 3,4-Methylenedioxymethamphetamine (MDMA), Impurities, Mass spectrometry, Reductive amination **155**, 141

Gastric rupture; Anorexia, Binge eating, Fatal **155**, 7

GC; Systematic toxicological analysis, Psychiatric drugs, Solid phase extraction, Screening **155**, 193

Glass; Annealing, Refractive index, Forensic casework **155**, 119

Haplotype; Y-chromosome STR, Population genetics, Danes **155**, 205

Haplotypes; Y-chromosome STRs, Population genetics **155**, 211

Hypertonic dehydration; Vitreous humor, Dehydration pattern, Biochemical profile in vitreous humor **155**, 1

Illicit drugs; Driving under the influence, Blood alcohol concentration, Medicinal drugs, Poly-drug use, Chronic alcohol abuse **155**, 83

Image retrieval; Firearm databases, Forensic science **155**, 35

Imaging; Forensic Science, Spectroscopy **155**, 112

Impurities; 3,4-Methylenedioxymethamphetamine (MDMA), Gas chromatography, Mass spectrometry, Reductive amination **155**, 141

Judicial report; Sexual child abuse, Medicolegal examination, Crohn's disease **155**, 24

Korean ethnic group; STR, AmpF/STR Profiler plus, Northeast China **155**, 216

Larval dispersal; Blowfly, Forensic entomology **155**, 61

Latent prints; Luminescence, Criminalistics, Nile Red **155**, 185

Law enforcement; Forensic science, DNA profiling, DNA databases, Criminal law **155**, 51

Leuckart method; MDMA, L–L extraction, Reductive amination, Safrole bromination synthesis, Route specific impurities **155**, 100

L–L extraction; MDMA, Reductive amination, Leuckart method, Safrole bromination synthesis, Route specific impurities **155**, 100

Luminescence; Criminalistics, Latent prints, Nile Red **155**, 185

Luoba ethnic group; Forensic science, STRs (short tandem repeats), Allele frequencies, Population data, Chinese **155**, 219

Magnesium; Forensic pathophysiology, Postmortem biochemistry, Serum, Calcium, Cause of death **155**, 18

Marijuana; Δ9-tetrahydrocannabinol, SFSTs, Driving impairment **155**, 172

Mass spectrometry; 3,4-Methylenedioxymethamphetamine (MDMA), Impurities, Gas chromatography, Reductive amination **155**, 141

MDMA; L–L extraction, Reductive amination, Leuckart method, Safrole bromination synthesis, Route specific impurities **155**, 100

Measurement; Face, Soft tissue thickness, CT, MPR image, PC-based **155**, 28

Medicinal drugs; Driving under the influence, Blood alcohol concentration, Illicit drugs, Poly-drug use, Chronic alcohol abuse **155**, 83

Medicolegal examination; Sexual child abuse, Crohn's disease, Judicial report **155**, 24

3,4-Methylenedioxymethamphetamine (MDMA); Impurities, Gas chromatography, Mass spectrometry, Reductive amination **155**, 141

MPR image; Face, Measurement, Soft tissue thickness, CT, PC-based **155**, 28

Multiplex; X chromosome, STR, Population data **155**, 71

Mutation rates; Y Chromosome, STR polymorphisms, UK populations **155**, 65

Myocarditis; Sudden cardiac death, Sinus node, Parvovirus B19 (PVB19), Polymerase chain reaction (PCR) **155**, 13

Nile Red; Luminescence, Criminalistics, Latent prints **155**, 185

Northeast China; STR, AmpF/STR Profiler plus, Korean ethnic group **155**, 216

Parvovirus B19 (PVB19); Sudden cardiac death, Sinus node, Myocarditis, Polymerase chain reaction (PCR) **155**, 13

PC-based; Face, Measurement, Soft tissue thickness, CT, MPR image **155**, 28

Plasma:whole blood distribution: clozapine; Fatal poisoning: clozapine, Post-mortem redistribution: clozapine, Fatal poisoning: interpretation of results **155**, 91

Poisoning; Ethylene glycol, Antifreeze **155**, 179

Poly-drug use; Driving under the influence, Blood alcohol concentration, Medicinal drugs, Illicit drugs, Chronic alcohol abuse **155**, 83

Polymerase chain reaction (PCR); Sudden cardiac death, Sinus node, Myocarditis, Parvovirus B19 (PVB19) **155**, 13

Population data; East Timor, STRs, AmpF/STR identifiler **155**, 77

Population data; Forensic science, STRs (short tandem repeats), Allele frequencies, Luoba ethnic group, Chinese **155**, 219

Population data; X chromosome, STR, Multiplex **155**, 71

Population genetics; Y-chromosome STR, Haplotype, Danes **155**, 205

Population genetics; Y-chromosome STRs, Haplotypes **155**, 211

Postmortem biochemistry; Forensic pathophysiology, Serum, Calcium, Magnesium, Cause of death **155**, 18

Post-mortem redistribution: clozapine; Fatal poisoning: clozapine, Plasma:whole blood distribution: clozapine, Fatal poisoning: interpretation of results **155**, 91

Psychiatric drugs; Systematic toxicological analysis, Solid phase extraction, GC, Screening **155**, 193

Reductive amination; 3,4-Methylenedioxymethamphetamine (MDMA), Impurities, Gas chromatography, Mass spectrometry **155**, 141

Reductive amination; MDMA, L–L extraction, Leuckart method, Safrole bromination synthesis, Route specific impurities **155**, 100

Refractive index; Glass, Annealing, Forensic casework **155**, 119

Ricochet; Forensic science, Crime scene reconstruction, Shotgun **155**, 188

Route specific impurities; MDMA, L–L extraction, Reductive amination, Leuckart method, Safrole bromination synthesis **155**, 100

Safrole bromination synthesis; MDMA, L–L extraction, Reductive amination, Leuckart method, Route specific impurities **155**, 100

Screening; Systematic toxicological analysis, Psychiatric drugs, Solid phase extraction, GC **155**, 193

Serum; Forensic pathophysiology, Postmortem biochemistry, Calcium, Magnesium, Cause of death **155**, 18

Sexual child abuse; Medicolegal examination, Crohn's disease, Judicial report **155**, 24

SFSTs; Marijuana, Δ9-tetrahydrocannabinol, Driving impairment **155**, 172

Shotgun; Forensic science, Crime scene reconstruction, Ricochet **155**, 188

Signal integrity; Authenticity, Digital audio recording, ENF Criterion **155**, 165

Signature; Bayesian, Biometrics, Face, Fingerprint, Forensic **155**, 126

Sinus node; Sudden cardiac death, Myocarditis, Parvovirus B19 (PVB19), Polymerase chain reaction (PCR) **155**, 13

Soft tissue thickness; Face, Measurement, CT, MPR image, PC-based **155**, 28

Solid phase extraction; Systematic toxicological analysis, Psychiatric drugs, GC, Screening **155**, 193

Spectroscopy; Forensic Science, Imaging **155**, 112

STR; AmpF/STR Profiler plus, Korean ethnic group, Northeast China **155**, 216

STR polymorphisms; Y Chromosome, UK populations, Mutation rates **155**, 65

STR; X chromosome, Multiplex, Population data **155**, 71

STRs; East Timor, Population data, AmpF/STR identifiler **155**, 77

STRs (short tandem repeats); Forensic science, Allele frequencies, Population data, Luoba ethnic group, Chinese **155**, 219

Sudden cardiac death; Sinus node, Myocarditis, Parvovirus B19 (PVB19), Polymerase chain reaction (PCR) **155**, 13

Systematic toxicological analysis; Psychiatric drugs, Solid phase extraction, GC, Screening **155**, 193

Δ9-tetrahydrocannabinol; Marijuana, SFSTs, Driving impairment **155**, 172

UK populations; Y Chromosome, STR polymorphisms, Mutation rates **155**, 65

Vitreous humor; Hypertonic dehydration, Dehydration pattern, Biochemical profile in vitreous humor **155**, 1